

## OIB - P-3 Orion 03/10/17 Science Report

**Aircraft:**

[P-3 Orion](#) ([See full schedule](#))

**Date:**

Friday, March 10, 2017

**Mission:**

OIB

**Mission Location:**

Greenland

**Mission Summary:**

IceBridge completed the baseline priority Laxon Line mission named in memory of pioneer satellite radar altimetry researcher Seymour Laxon. This mission is a near-exact repeat of similar missions flown each year of OIB beginning in 2009. In addition to Level-1 Requirements SI1 and SI2, the flight addresses sea ice level 1 baseline requirement SI3a by providing data on the thickness gradient and distribution of perennial and seasonal ice across the Arctic Basin.

This was a difficult decision to launch since the forecast showed clouds throughout the majority of the flight line. We expected that the clouds would be thin enough to range through for most of the survey similar to what we had experienced when we flew through the cloud system the previous day. Good data was collected for approximately 70% of the flight line as the clouds were thin enough for us to range through, though we did change altitude throughout the flight to avoid contaminating the ATM transmit pulse. ATM and DMS data were lost on most of the final southbound leg due to low and thick clouds. During this line we ascended to 3000 feet to avoid icing conditions. This change in altitude required a change in the Snow/Ku radar bandwidth from 2-18 GHz to 2-8 GHz and some data was lost during the transition, but thanks to the work of the CReSIS team this transition allowed data to continue to be collected during the final portion of the mission.

Overall, this was a successful data collection mission. The transition to Fairbanks allows us to take advantage of weekend airport hours and expected good weather to continue data collection in the Beaufort and Chukchi Seas.

**Data volumes**

ATM: T5: 36 Gb      T6: 125 Gb

FLIR: 10 Gb

Cambot: 27 Gb

KT19: 10 Mb

DMS: 63.2 Gb

Snow/Ku radar: 1.1 Tb

MCoRDS: 4.1 Gb

Accumulation radar: Did not run

data on: 1354

data off: 2030

**Submitted by:**

Nathan T. Kurtz on 03/10/17

**File:**

 [laxon\\_line.pdf](#)

**Source URL:** [https://airbornescience.nasa.gov/science\\_reports/OIB\\_-\\_P-3\\_Orion\\_03\\_10\\_17\\_Science\\_Report?destination=node/48405](https://airbornescience.nasa.gov/science_reports/OIB_-_P-3_Orion_03_10_17_Science_Report?destination=node/48405)